

EXHIBIT 6

Antitrust Law: An Analysis of Antitrust Principles and Their Application (CCH) 397

Antitrust Law: An Analysis of Antitrust Principles and Their Application (Areeda and Hovenkamp)
> *Antitrust Law: An Analysis of Antitrust Principles and Their Application - Areeda and Hovenkamp* > ***CHAPTER 3 The Antitrust System of Remedies (300-399)*** > ***3G The Economics of Impact, Antitrust Injury, and Antitrust Damages (390-399)***

397. Damages for Exclusionary Practices

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Damages for Exclusionary Practices

Purchasers are not the only potential victims of antitrust violations. Those who are excluded (or foreclosed) from participating in a market suffer some economic injury. If the exclusion was the result of an antitrust violation, then the excluded parties may recover antitrust damages under §4 of the Clayton Act.¹ If firms are excluded because they cannot compete due to poor quality or cost inefficiencies, then they will not be successful plaintiffs. That is, if the plaintiff is excluded due to the defendant's "superior product, business acumen, or historic accident [luck],"² then the exclusion will not violate §2 of the Sherman Act. If, on the other hand, some firms are excluded due to predatory pricing,³ exclusive dealing arrangements,⁴ tying contracts,⁵ or anticompetitive refusals to deal,⁶ then the firm may invoke the antitrust laws and sue for damages under §4 of the Clayton Act.

In principle, lost profits can be estimated using a before-and-after or a yardstick methodology. To avoid speculation, the plaintiff will have to provide a reliable foundation for estimating the "but for" profits.⁷ In addition, there will be questions regarding the length of the damage period. But most importantly, there will be a need to control for any factors that might have influenced the plaintiff's profit performance that are competitively neutral or even procompetitive. A failure to control for these factors will undermine the validity of the plaintiff's damage estimates.

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¹ These plaintiffs also have to satisfy the same standing and antitrust injury requirements that purchasers must satisfy. See 3F.

² See *United States v. Grinnell Corp.*, [384 U.S. 563, 570-71 \(1966\)](#). On the monopolization offense, see WK-CHAP6 - WK-CHAP7.

³ Those who are victimized by a scheme that raises their costs can also assert that they were victims of predation.

⁴ On exclusive dealing, see WK-CHAP18.

⁵ See WK-CHAP17.

⁶ On unilateral refusals to deal, see 7D-3.

⁷ See P392.

Nature of the injury.

When a firm has been completely or partially foreclosed from participating in a market, it is unable to make sales that it presumably would have made otherwise. As a result, the firm loses the opportunity to earn profits on those sales. Thus, the injury to the foreclosed firm's business is the lost profit on lost sales.⁸ At the time of trial, the plaintiff may have to estimate future lost profits as well as past lost profits. Estimating the future lost profits requires forecasting future business and controlling for a variety of factors that could influence profits. This exercise is complicated by the relief granted. If the exclusionary conduct stops following a judgment for the plaintiff, the plaintiff may be able to recover its lost business. Calculating lost profits in this event requires an estimate of how the plaintiff would have performed in the absence of the foreclosure and how it will perform now that the exclusionary practices have ceased. No doubt there would be some difference between the two until the plaintiff has fully recovered from the exclusion. Thus, the plaintiff will need to model the recovery pattern. Additionally, future profits must be reduced to present value so that a lump-sum award can replace the flow of future profits.⁹

In any event, the foreclosed plaintiff's injury is the difference between its actual profits and the profits that it would have earned but for the foreclosure. These, of course, are the *net* profits; all costs that were avoided because sales were not made must be deducted from the lost sales revenue to arrive at the net harm suffered by the plaintiff. It is important to understand that a plaintiff may suffer lost profits even if its profits were both positive and growing during the damage period. For example, if the plaintiff's profits in the period preceding the damage period were \$1.0 million and \$1.5 million during the damage period, this does not mean that there was no injury. If the "but for" profits were \$2.0 million during the damage period, then there were lost profits of \$500,000.

397b.**Measure of value.**

In an exclusion case, the firm's loss is the present value of the profit stream that would have been enjoyed but for the exclusion. Setting aside the problems inherent in estimating the profit stream, the proper way to calculate this present value is examined in P393. From time to time, alternative measures of value have been suggested in the valuation literature.¹⁰ Those "alternatives" that are economically equivalent to the present value of the future profit stream may be suitable substitutes. Those that are substantially different from an economic or financial perspective should be viewed with considerable skepticism.

⁸ This is consistent with the Supreme Court's reasoning in *Bigelow v. RKO Pictures* [327 U.S. 251 \(1946\)](#). For an expression of skepticism, see Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and Its Practice* §17.6b (6th ed. 2020) ("In most such cases, the measure of damages is so imprecise that 'loss of the opportunity to do business' would describe the plaintiff's loss more accurately than 'lost profits,' which suggests a sum that is quantifiable with a fair amount of precision.").

⁹ The principles of present value calculations are presented in P393.

¹⁰ These have been summarized in various places. See, e.g., Shannon Pratt, *Valuing a Business: The Analysis and Appraisal of Closely-Held Companies* (1981); Shannon Pratt, *Valuing Small Businesses and Professional Practices* (1986); Edward Kabisalis & James Hagy, *Business Acquisitions and Leveraged Buyouts* (1986).

397b1.***Capitalized earnings .***

The concept of capitalized earnings is that the value of a business may be estimated by examining its profitability. A business that earns high profits will be worth more than one earning lower profits. There are three basic approaches to capitalizing earnings. First is the so-called *discounted cash flow* approach, which is economically and mathematically equivalent to what was explained as the present value of lost profits. While there may be some relatively minor differences, the spirit of the approach is precisely the same. This, then, is an acceptable measure of damages, but it still must be implemented correctly.

A variant of this approach is the *income capitalization* method. In this case, the plaintiff's net income (or profit) for one year (usually the most recent year) is calculated from the financial statements. Adjustments are made for noncash items such as depreciation and amortization, which are influenced by tax rules rather than economic logic, and for interest, which is determined by decisions on how to finance the venture. In most cases, one would be interested in EBITDA—earnings before interest, taxes, depreciation, and amortization. Interest is not deducted because this is a payment for funds that are borrowed rather than contributed by the owner, and requires a return whether borrowed or contributed. Taxes are not deducted because they will be influenced by the plaintiff's current situation. The fact that future cash flows will be subject to taxes is taken into account in the discount rate. Depreciation and amortization are not deducted because these are accounting artifacts that expense the use of fixed assets, but such assets have to remain in the business if it is to continue operating in the future. Once the firm's EBITDA is determined, it is capitalized by dividing by the expected rate of return. For example, if a 20 percent return is expected and the EBITDA for the year in question were \$100,000, then the capitalized value would be $\$100,000/0.20 = \$500,000$. It is clear from our earlier examination that the expected rate of return acts like the interest (or discount) rate. For this approach to be reliable, the expected rate of return must be a good approximation of the appropriate discount rate. An implicit assumption of this approach is that the plaintiff has an infinite life.¹¹ This implicit assumption may or may not be valid depending on the circumstances. For example, it might not be valid if the business depends crucially on the continued presence of certain people, who will have finite lives. In this event, this approach will overstate the value of the firm. In contrast, if the business can be sold and others can manage it equally well, the assumption will be valid and the approach to valuation will be sound. Once the jury understands that this method assumes that the firm has an infinite life, some skepticism may arise. After all, it is easy to show examples of firms that once appeared strong but no longer exist.

The third capitalization method employs *excess earnings* as a measure of goodwill. In essence, this approach reduces the plaintiff's cash flow to account for opportunity costs, such as the required return on similar investments, as well as the economic depreciation of capital assets and the amortization of intangible assets. The net result is excess earnings—that is, earnings above those necessary to keep resources invested in this particular

¹¹ This follows from the mathematical fact that the geometric series converges to $1/i$ in the limit as n approaches infinity.

enterprise. These excess earnings are equivalent to the economic definition of *profit*. The capitalized value of the excess earnings is popularly characterized as *goodwill*.¹² The value of the firm is the sum of its goodwill plus the fair market value of the tangible assets. Properly computed, this approach provides the best approximation of the firm's value from a purely economic perspective.

397b2.

Market-determined values .

There are two valuation methods that rely on market data. First, the value of a business can be established through stock market transactions. For a publicly traded company, this is a fairly simple procedure. For each class of stock, one simply multiplies the stock market value of each share by the number of shares outstanding. Generally, this will not work for closely held corporations whose stock is not publicly traded or is rarely sold.¹³ Even when it is sold, the sales price may not reflect the true economic value because the sale may not be an arm's length transaction.

A potentially fruitful approach resides in comparable sales. An expert would obtain information on sales of comparable businesses (i.e., yardsticks) and use those values as estimates of the plaintiff's value. The problem, of course, lies in identifying comparable sales. In most instances, it will be difficult to find truly comparable businesses, which is the usual problem with all yardstick efforts. The most promising use of comparable sales would seem to be in a franchise context because of the fundamental similarity of the franchisees. Usually, the franchisor's records can be used to identify sales of franchisees. Using economic and demographic data on the locations and financial performance data on the franchisees, it may be possible to isolate the sales of comparable outlets in the franchise system. The purchase prices of comparable outlets may be quite reliable proxies for the market value of the plaintiff franchisee. In other contexts, however, establishing comparability may be problematic, which would undermine the validity of the comparison.

397b3.

Balance sheet methods .

A company's balance sheet provides *historical* data on the value of assets and liabilities. Consequently, the data usually fail to provide a reliable estimate of the present value of the foreclosed plaintiff's profits. There are three balance sheet techniques for valuing a business: book value of the tangible net worth, fair market value of tangible net worth, and liquidation value.

To calculate the book value of tangible net worth, one subtracts the total liabilities identified on the balance sheet from the firm's total assets. In addition, one must also subtract the book value of the intangible assets, which includes patents, trademarks, capitalized research and

¹² Thus, goodwill has nothing to do with warm, fuzzy feelings about the firm. Even title loan companies may have goodwill in a financial sense.

¹³ There is also a conceptual problem with this method. Stock prices reflect the cost of acquiring a minority interest in a company; they do not reflect the cost of acquiring a controlling interest in a company. Usually, this cost is much higher, as can be seen in the difference between a tender offer and a stock's previous trading price.

development expenditures, and goodwill. The result is the book value of the tangible net worth. The sole virtue of this measure is its ease of calculation. All of the numbers are on the balance sheet, and the arithmetic is straightforward; no real judgment is required. But this method's defects are fatal. To the extent that some of the assets have appreciated, this method fails to reflect those values. Similarly, the method fails to account for any contingent liabilities that have not been recorded. Finally, and most important, this method fails to account for the business's future profit potential. Consequently, this method must be rejected as generally inaccurate. In some instances, it will overstate the value; in other cases, it will understate the value.

The fair market value of tangible net worth also does not necessarily reflect the loss of future profits to a plaintiff. An asset's fair market value is defined to be the price that a willing buyer will pay and a willing seller will accept if there is no compulsion in making the bargain and the possibility of distress sales is eliminated. Using this method, an expert can adjust the historical book values of the plaintiff's tangible assets to reflect fair market value. The firm's liabilities are deducted from the fair market value of the tangible assets to yield the fair market value of the firm's net worth. This method is superior to the simple book value because it provides an estimate of the market value of the plaintiff's assets if the business were to be sold in pieces. But it fails to take into account the fact that these tangible assets may yield a stream of profit beyond the assets' fair market value when combined into the plaintiff's business.

The final balance sheet technique measures the liquidation value of the plaintiff's assets. As with the fair market value approach, this method envisions a sale of the assets separate and apart from the organization that has been employing them.¹⁴ The difference is that liquidation suggests a sense of urgency—that is, a forced sale. Typically, the liquidation value makes sense only when the sum of the values of the individual assets exceeds the going-concern value of the firm. Since there is an element of compulsion in forced sales, the assets may be valued at distress prices, which are below fair market prices. Generally, this whole approach is not appropriate because the plaintiff wants an estimate of the going-concern value of its business, which is what was lost.

397c.

Estimating growth rates.

When estimating future profits, one must estimate a growth rate. Typically, these growth rate projections are based on past experience, which can lead to unreasonable estimates. Suppose that a firm had been in business for 14 years prior to its foreclosure. The sales history is presented in Table 1. As one can see, the firm experienced continuous growth and, absent any other information, one would reasonably assume continued success in the future. The growth rate to use, however, is another matter. Over the firm's 14-year history, the compound growth rate was 19 percent. Note, however, that the compound growth rate during the first seven years was 35 percent, whereas the compound annual growth rate for the second seven-year period was only 6.5 percent. Clearly, the overall growth rate of 19 percent is triple the firm's most recent experience. In this case, it appears that the start-up

¹⁴ J. Fred Weston & Eugene Brigham, *Managerial Finance* 550-51 (7th ed. 1981).

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years involved very high growth rates because the firm started from a very low base. Between years one and two, the firm increased its sales by 600 units, which amounted to 60 percent growth. In later years, a 600 unit increase on, say a 10,000-unit base, would be only a 6 percent growth rate, even though the increase in quantity is 600 in each instance.

Table 1

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1	1,000
2	1,600
3	2,300
4	3,100
5	3,900
6	4,900
7	6,050
8	6,550
9	7,050
10	7,550
11	8,050
12	8,550
13	9,050
14	9,550

The point of this example is that start-up periods often involve very high growth and, for that reason, should perhaps be excluded in estimating future growth. It would seem more reasonable to use the 6.5 percent growth rate for the future. But even this growth rate may overstate the future. Between years 11 and 12, the firm grew by 6.2 percent; between years 12 and 13, it grew by 5.8 percent; and between years 13 and 14, it grew by 5.5 percent. Thus, the growth rate for this firm was declining just before the foreclosure. It would seem that estimates of future growth should take this trend into account.

As with other elements of the damage calculations, there must be some empirical basis for the projected growth rates. When there appears to be no empirical support, the assumed growth rates are apt to be rejected by the court. For example, in *Wells Real Estate*,¹⁵ the First Circuit found insufficient an unsupported prediction of future growth but for the defendant's behavior. Similarly, in *McGlinchy*,¹⁶ the Ninth Circuit rejected a growth rate forecast that was clearly contrived by the plaintiff: "[I]acking any sound foundation, the study would mislead a jury into believing that damages had grown exponentially over the relevant period."

Even when past growth rates are based on evidence in the record, one may not blithely assume that such growth will continue in the future for at least two reasons. First, one must take into account the competitive reactions of the plaintiff's rivals. It is unreasonable to expect no reaction to a substantial loss in sales volume. If, for example, a recent entrant experienced substantial growth and was taking market share from the incumbents, one must anticipate their likely reactions. These reactions may take the form of price reductions, quality improvements, more aggressive promotion, better service, and the like. Absent some evidence to the contrary, it is unreasonable to expect no reaction. For example, in *Park*,¹⁷ the court found the plaintiff's estimated market share of 20 percent in conjunction with a profit margin of 30 percent to be unreasonable because it assumed that such success would provoke no competitive price reductions by the plaintiff's rivals. Similarly, in *American Bearing*,¹⁸ the plaintiff's expert projected market shares for the plaintiff of 12.5 percent, 37 percent, and 50 percent in successive years, based on the assumption that the defendant would watch its market share erode without a competitive price reduction. This, without more, is unreasonable.

The second reason why past growth rates may not continue indefinitely involves economies of scale. A production facility of a given size generates an average cost curve, which may have the traditional U-shape. At low volumes of output, there are unexploited economies of scale, which means that the per-unit cost declines with increases in output. In this range, growth actually improves the firm's efficiency and thereby makes it more cost-competitive. At some point, however, diseconomies of scale set in and per-unit cost rises with increases in

¹⁵ *Wells Real Estate v. Greater Lowell Bd. of Realtors*, [850 F.2d 803, 816 \(1st Cir.\)](#), cert. denied, **488 U.S. 955 (1988)**.

¹⁶ *McGlinchy v. Shell Chem. Co.*, [845 F.2d 802, 807 \(9th Cir. 1988\)](#).

¹⁷ *Park v. El Paso Bd. of Realtors*, [764 F.2d 1053, 1067 \(5th Cir.\)](#), cert. denied, **474 U.S. 1102 (1986)**.

¹⁸ *American Bearing v. Litton Indus.*, [540 F. Supp. 1163, 1173 \(E.D. Pa. 1982\)](#), aff'd, [729 F.2d 943 \(3d Cir.\)](#), cert. denied, **469 U.S. 854 (1984)**.

output. As costs are rising, further growth becomes problematic because the firm in question may be operating less efficiently than its rivals. Thus, a plaintiff would have to show that it could actually continue growing without running into serious diseconomies of scale if it projects continued growth into the future.

397d.

Duration of the damage period.

Plaintiffs that have been excluded from the market by some (allegedly) anticompetitive means suffer lost profits. But for how long? In principle, a business could go on forever, and therefore, a permanently destroyed business's damage period would be infinite. Of course, this sounds absurd, but future losses have to be discounted to present value, which means that most of the total amount will be recovered in the relatively near term. Suppose, for example, that the plaintiff's expert estimated an annual loss of \$100,000. The present value of \$100,000 forever at a 10 percent discount rate is \$1,000,000. The present value of \$100,000 for 20 years at 10 percent is \$851,356. For 30 years, it is \$942,691. Thus, the difference between \$1,000,000 and \$942,691 represents the present value of the profits lost between year 30 and eternity. Consequently, the assumption of an infinite life is not as important as it would seem at first blush. There is, however, a credibility problem when an expert calculates damages on the assumption that a business will have an infinite life. Some experts try to mask this assumption. Again, assume an annual estimated loss of \$100,000. The present value calculation for, say, ten years may be shown along with a terminal value as follows:

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Year	Amount	Present Value
1	\$100,000	\$90,909.09
2	\$100,000	\$82,644.63
3	\$100,000	\$75,131.48
4	\$100,000	\$68,301.35
5	\$100,000	\$62,092.13
6	\$100,000	\$56,447.39
7	\$100,000	\$51,315.81
8	\$100,000	\$46,650.74
9	\$100,000	\$42,409.76
10	\$100,000	\$38,554.33
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	\$1,000,000	\$614,456.71

Terminal Value = \$1,000,000 – \$614,456.71 = \$385,543.29

The careful reader will note that this is a sum that is essentially \$1,000,000. This results from the fact that the so-called terminal value is the present value of \$100,000 per year from year 11 to infinity. Trying to hide the fact that the duration of the damage period is infinite will not be lost on the defendant's expert, however, so the effort should be futile.

The real problem with very long damage periods is that much can happen in the future that is difficult to anticipate. As a simple example, consider what has happened to computing technology. In a relatively short period of time, we have gone from cumbersome manual typewriters to PCs to tablets. Instead of carting a desktop PC off to college, students have laptops with enormous processing power, iPads, and smartphones .

Projecting damages far into the future is perilous because of possible new competition, new products, changes in production technology, altered business conditions, regulatory changes, and the like. These sorts of changes could swamp any effects of an antitrust violation. The courts have recognized this possibility and have rejected damage periods that appear to be arbitrarily long. ¹⁹ Similarly, if a plaintiff assumes that economic conditions will remain unchanged more or less indefinitely, the court is apt to find that untenable. In *McGlinchy*, ²⁰ for example, the plaintiff's assumption that its expenses would remain constant for nine years was rejected.

There does not appear to be a clear answer regarding how far into the future a plaintiff may project its damages. When small, owner-operated firms have been foreclosed, some courts have looked to the owner's expected work life. In *Malcolm*, ²¹ for example, the court found that the "plaintiff's age, health, and desire to remain in business" provided an acceptable foundation for inferring the length of the damage period. Absent any conflicting evidence, this approach may be satisfactory but still ignores the possibility of intervening factors that could undermine the validity of the approach. For example, a franchise agreement may have termination or renewal provisions that would permit the franchisor to end the plaintiff's business life before "age, health, and desire to continue" would terminate the business. Moreover, it assumes that the business could not be passed on to an heir or sold to a third party.

397e.

A before-and-after illustration.

¹⁹ *Mid-Texas Commc'ns Sys. v. AT&T*, [615 F.2d 1372 \(5th Cir. 1980\)](#), cert. denied sub nom. *Woodlands Telecomms. Corp. v. Southwestern Bell Tel. Co.*, **449 U.S. 912 (1980)**.

²⁰ [845 F.2d at 807](#).

²¹ *Malcolm v. Marathon Oil Co.*, [642 F.2d 845, 864 \(5th Cir.\)](#), cert. denied, **454 U.S. 1125 (1981)**.

The *Key Enterprise* case provides a simple example of a before-and-after estimate of damages in a foreclosure setting.²² In response to the rapidly increasing costs of health care, Medicare developed a system of diagnosis-related groups (DRGs) that specified the Medicare reimbursement rates for various health problems. These reimbursement caps, which replaced the old cost-plus reimbursement system, provided an incentive for hospitals to limit the stays of their patients. For many patients, this meant convalescing at home rather than in the hospital. This, in turn, gave rise to a demand for convalescent aids for which patients had a short-run need. Collectively, these convalescent aids-hospital beds, bedside commodes, wheelchairs, walkers, oxygen concentrators, and the like-are known as durable medical equipment (DME).

At the time of the alleged foreclosure, there were four DME suppliers in the relevant geographic market. The vast majority of the DME business flowed from patients discharged by Venice Hospital.²³ One of the four DME suppliers (MPAC) formed a joint venture with the hospital. The plaintiff, Venice Convalescent Aids (VCA), alleged that it was foreclosed from hospital referrals and filed suit for damages. Prior to the formation of the joint venture, the patients, their doctors, or the discharge planners selected the DME supplier based largely on the quality of service provided. Following the formation of the joint venture, an employee of MPAC made the selection for the vast majority of the patients. This, in effect, foreclosed VCA from *new* referrals. Its revenues did not fall to zero immediately because it had a book of business with current patients. As long as these patients did not die or move away, they would generate rental revenues throughout their convalescence. But without new referrals, VCA's revenues would eventually disappear.

The plaintiff used a simple before-and-after methodology to estimate lost sales. These lost sales were converted into lost profits by deducting the variable costs that were not incurred as a result of not making the sales. There were several judgments that had to be made along the way. First, the foundation for estimating the "but for" rental revenues was VCA's actual monthly experience from August 1983 through April 1985, when the joint venture was implemented. During this period, rental revenues were rising dramatically, as can be seen in Table 2 and Figure 1. In August 1983, VCA's rental revenue was \$19,682 and by April 1985-some 21 months later-rental revenues were \$32,096. This is an increase of some 63 percent, which amounts to an average increase of 3.0 percent per month. Although VCA's performance was impressive, projecting this growth forward would have been unrealistic for at least three reasons: (1) the demand for DME was not likely to continue growing indefinitely; (2) Medicare was beginning to reduce the DME reimbursement rates; and (3) there was some new entry into the local DME market. At the same time, population was growing and patients were continuing to be discharged who were in need of convalescent aids. In the end, VCA used the average monthly rental revenues over the last six months preceding the joint venture as an estimate of the monthly revenue throughout the damage

²² *Key Enter. v. Venice Hosp.*, [919 F.2d 1550 \(11th Cir. 1990\)](#). The case was settled while a petition for rehearing was pending. The Eleventh Circuit granted the rehearing, [979 F.2d 806 \(11th Cir. 1992\)](#), but then dismissed the case as moot due to the settlement, [9 F.3d 893 \(11th Cir. 1993\)](#). To the extent that it is relevant, Roger D. Blair was the plaintiff's expert. A more complete description of this case is contained in Roger D. Blair & James A. Burt, *Leveraging Monopoly Power Through Hospital Diversification*, [1 Stan. J.L. Bus. & Fin. 287 \(1995\)](#).

²³ There was a nominal amount of business from physician office referrals and from walk-in customers.

period. Compared to a projection based on past performance, this was extremely conservative. In Figure 2, we have displayed the rental revenues for the period prior to the joint venture and a regression line projected for just 20 months into the future. The horizontal line at \$32,408 represents the six-month average. It is plain to see that the simple regression predicts rental revenues for VCA that are well above the \$32,408 average. Of course, the farther one goes into the future, the greater the divergence between the six-month average and the regression line.

Table 2 VCA Rental Revenues

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8/83	\$19,682
9/83	\$18,329
10/83	\$19,460
11/83	\$21,914
12/83	\$24,367
1/84	\$15,231
2/84	\$23,746
3/84	\$24,993
4/84	\$24,638
5/84	\$20,277
6/84	\$24,463
7/84	\$26,999
8/84	\$28,116
9/84	\$29,108
10/84	\$30,350
11/84	\$30,827
12/84	\$31,314
1/85	\$34,149
2/85	\$33,017
3/85	\$33,044
4/85	\$32,096

Average: $11/84 - 4/85 = \$32,408$

In principle, one could project damages indefinitely into the future because a business has no natural life. In practice, however, it is fairly risky to project damages too far into the future because of unavoidable vagaries, which in this case involved changing Medicare rules, new entry, technological changes, and equipment replacement costs. Moreover, VCA was a family-owned and operated business. Sometimes, such businesses do not fare well when the original owners sell the business to someone else. In the end, VCA limited the damage period to five years. Part of that time preceded the trial, and therefore the lost profits for this period were historical. There were damages that extended into the future as well. Thus, there was a mixture of past and future damages to calculate.

The actual sales revenue declined substantially following the formation of the joint venture. By December 1987, monthly rentals were down to some \$11,500, which was about one-third of the six-month average benchmark. Based on the decline in the revenues, the plaintiff projected its future revenues to hit zero by February 1989 and remain at zero until the end of the damage period.

The lost rental revenues were computed for each month during the damage period. Lost rentals, however, are not lost profits. For that, the plaintiff had to deduct the avoided variable costs—that is, those costs that were not incurred because of the fact that rentals were not earned. To estimate the appropriate variable costs, the plaintiff and its expert reviewed the detailed cost categories in the plaintiff's financial records. They determined that some costs were completely fixed. For example, VCA's expenditures on computer maintenance, utilities, store maintenance, rent, and equipment leases were deemed to be fixed in the sense that they would not change with changes in DME rental revenues during the damage period. At the other extreme, some costs were completely variable. For example, expenditures on oxygen disposables, mattress disposables, oxygen cylinder rentals, contract delivery, and bad debt were entirely variable in the sense that such expenses would not be incurred if corresponding DME rentals were not made. Finally, some of VCA's costs were partially variable. These included expenditures on office supplies, fuel, vehicle maintenance, and insurance. Based on an assumption that the output and the input prices were constant through the damage period, the plaintiff calculated the variable costs as a percent of total rental revenues.²⁴

In calculating the lost profit, the plaintiff totaled the past lost rental revenues without any interest.²⁵ The future lost rentals were discounted to present value. The total lost rentals were reduced by the variable cost percentage to yield the lost profit as shown in Table 3.

Table 3 Lost Profits Calculations

²⁴ As a general proposition, it is appropriate to calculate variable costs as a percentage of sales revenue only under narrow circumstances. Suppose, for example, that the expected cost of a warranty repair is \$200 and the price of the product being repaired is \$10,000. This warranty cost is 2 percent of revenue. But if the price of the product were to fall to, say, \$8,000, there is no real reason to suppose that the labor and materials necessary to perform the warranty work would decline. In that case, the warranty cost of \$200 would be 2.5 percent of the \$8,000 revenue. To use the 2 percent figure would be to understate the avoided costs and therefore overstate the lost net profits.

²⁵ Section 4 does not provide for pre-judgment interest. See P393.

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Lost rental revenues	\$1,139,196
Less variable cost @ 33.2%	
Lost profit	\$760,983

397f.**Yardstick model of damages.**

In principle, the yardstick approach to damage estimation can be employed in foreclosure cases. Its usefulness, however, is limited:

... *if* the markets of the two firms are identical, and *if* the plaintiff's firm and the firm used for comparison stand in the same relative position in those markets, offer the same product mix, have comparable management and are comparable in all other respects, then the factfinder may infer that the two would have had comparable revenues or profits but for the violation.²⁶

This is, to say the least, a demanding standard, which is why the yardstick approach is rarely used. No doubt there are suitable yardstick candidates, but the problem is in identifying such a firm. Suppose, for example, that a liquor wholesaler lost certain key brands and went out of business as a result. Finding a yardstick would be a daunting task. The plaintiff would have to identify a firm in a different, albeit identical, market that was as successful as the plaintiff prior to its foreclosure. That yardstick would have to sell the same brands, be the same relative size, have similar profitabilities, and have similarly competent management. As a practical matter, it is not obvious just how one would go about identifying such a firm. Additionally, the proposed yardstick is not apt to be terribly cooperative with the plaintiff. First, it might be reluctant to antagonize the defendant, who would have to be a key supplier. Second, it would probably prefer not to have its financial records discovered, and its key personnel would prefer to not be bothered with depositions and the rest of the discovery process.

Given the difficulty of finding a traditional yardstick, some effort might be devoted to building a model of firm performance that can be used as a yardstick. This is an interesting approach that can be promising if it is done with care. If not, the damage estimate is apt to be deemed speculative.

397g.**Predation.**

Rivals may be excluded entirely or partially due to predation, which is a monopolizing practice.²⁷ In its classic form, predation occurs as pricing below cost to drive a rival from the market. In essence, the would-be monopolist sets price at a level that is so unprofitable that its rivals move their resources into another occupation. In theory, once the predator has the field all to itself, it recoups the losses suffered during the period of predation by charging monopoly prices. The victim of predatory pricing suffers financial losses during the predation period and suffers future lost profits following its demise. In this scenario, one way to estimate the damages is to estimate the going-concern value of the victim prior to the predatory pricing. This value represents the present value of the expected future profits. Assuming that the going-concern value can be reasonably estimated, this will provide a

²⁶ Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and Its Practice* §17.6b2 (6th ed. 2020).

²⁷ On predation generally, see 7C.

measure of the firm's value but for the predation. If the firm sold off its assets as it left the market, then these sums must be deducted from the going-concern value to capture the net loss.

In essence, the plaintiff is claiming as damages the future profits that it would have earned but for the predation minus any salvage value that it received. This calculation is not a straightforward matter. First, the plaintiff must determine the prices that it would have faced absent the predation. Since the predator got overly aggressive on price and arguably went too far, legitimate prices would necessarily be higher, but perhaps not by much. Assuming that the defendant would have been aggressive anyway, the "but for" price could have been as low as average cost or even average variable cost.²⁸ If the plaintiff could have sold its output at those prices and still made a profit, then those forgone profits would be a measure of the damages due to predation. If the plaintiff could not have been profitable at low (but legal) prices then one is hard-pressed to see how it suffered any antitrust injury.

Estimating the "but for" prices requires controlling for varying market conditions. For example, in *Inglis*²⁹ the plaintiff alleged that the defendant had engaged in predatory pricing. Based on the defendant's pricing behavior prior to the very aggressive pricing episode, the plaintiff's damage estimates assumed that the defendant's prices would have exceeded its costs of production by \$0.031. The court rejected this assumption because there was no evidence that market conditions were the same in the base period and in the damage period.

In addition to estimating the "but for" prices, the plaintiff must also estimate the quantity that it would have sold. Its sales during the predation period cannot be used because prices were presumably lower than they would have been otherwise. Since demand functions have a negative slope, the quantity sold would have been larger than the quantity sold at higher prices. Some reasonable estimate of sales volume must be presented, however, if lost profits are going to be reasonably estimated.

As with other damage calculations, the plaintiff must account for a host of factors that could influence its profitability. As already mentioned, the plaintiff must account for aggressive, legitimate pricing by the defendant and for other competitive responses such as improvements in product quality, service, credit, promotions, and the like. There is also the danger of new entry and shifts in demand. For example, in *Southern Pacific Communications*, the plaintiff failed to account for competitive factors that had nothing to do with the defendant.³⁰

In many ways, the damage calculation is easier if the victim is not driven out of business entirely. In that event, if it can show that it would have been profitable, or at least not unprofitable, then its losses will be the damages. This calculation becomes more complicated if the plaintiff attempts to claim more than this minimal amount.

397h.

²⁸ On cost standards for predatory and nonpredatory prices, see 7C-3.

²⁹ *William Inglis & Sons Baking Co. v. ITT Cont'l Baking Co.*, [942 F.2d 1332 \(9th Cir. 1991\)](#).

³⁰ *Southern Pac. Commc'ns Co. v. AT&T Co.*, **556 F. Supp. 825 (D.D.C. 1982)**, *aff'd*, [740 F.2d 1011 \(D.C. Cir. 1984\)](#).

Exclusion in tying cases.

Tying contracts can lead to damage claims from two directions: (1) the allegedly overcharged buyer and (2) the foreclosed seller(s) of the tied good. The buyer's claims were analyzed in P395 ; we now turn to the foreclosed seller of the tied good. To assess the complexity of the requisite damage estimate, it is useful to recall how the tying contract affects the prices of the tying and tied goods. In addition, it is necessary to consider the structure of the tied-good market.

397h1.***Competitive tied-good market .***

In the case of a competitively structured tied-good market, the price of the tying good is usually below the price that would be charged absent the tying contract. The price of the tied good is raised above the competitive level. Arguably, the tying contract excludes the seller's rivals in the tied-good market from selling to the buyers of the tying good. For example, when IBM tied its cards to its machine leases, rival manufacturers of paper cards were foreclosed from selling to IBM's lessees.³¹ IBM raised the price of a card above the competitive level and presumably reduced the rental rate on the machine. The foreclosed rivals could not base their damage calculations on IBM's card prices because those prices would have been lower absent the tying contract. It would be perverse to use the antitrust laws to claim lost profits based on overcharges made possible by the tying contract. Absent the presumably illegal contract, IBM's lessees would be paying competitive prices for the cards. Thus, foreclosed rivals must base their damage calculations on competitive prices. This, of course, makes the claim for lost profits due to being foreclosed from sales to IBM's lessees much smaller.

There is another consideration as well. Presumably, competent paper companies can make the cards for the IBM machines and therefore could sell their cards to IBM for resale to their lessees.³² In this way, the paper companies would not be foreclosed, although they would sell to IBM rather than to IBM's lessees. The volume of business would be the same. For its part, IBM should have no real interest in producing its own cards unless it could do so more efficiently than the paper companies. Under these circumstances, the "foreclosed" firms are not really foreclosed; they just compete at a different level.

397h2.***Imperfectly competitive tied-good market .***

Suppose the tied good is supplied under imperfectly competitive conditions. This market structure provides an economic incentive for tying.³³ Suppose the defendant sells a product over which it has monopoly power to a downstream industry. The downstream purchasers employ the defendant's product as an intermediate input in production. Suppose a

³¹ *International Bus. Machs. Corp. v. United States* , [298 U.S. 131 \(1936\)](#).

³² IBM tried to argue that it had to tie cards to the leases to guarantee the card quality and smooth functioning of the machines. This argument was rejected due to the alternative of issuing precise specifications for the cards.

³³ For an economic analysis, see Roger D. Blair & David L. Kaserman, *A Note on Dual Input Monopoly and Tying* , 10 Econ. Letters 494 (1982); Michael D. Whinston, *Tying, Foreclosure, and Exclusion* , 80 Am. Econ. Rev. 837 (1990).

complementary input is supplied by an imperfectly competitive industry at noncompetitive prices, which cause the demand for the defendant's product to be lower. This, of course, provides a profit incentive for the defendant to begin supplying the complementary input. If the defendant elects to use a tying arrangement, its imperfectly competitive rivals would also be foreclosed from this book of business. If they claim damages, the question is what price should be used for the damage calculations. Antitrust policy would not be furthered if the foreclosed firms could use noncompetitive prices for the damage calculations. This would serve to protect monopoly profits rather than promote competition. If the foreclosed firms are required to use competitive prices, their damages-if any-will not amount to much.

397i.

Foreclosure due to exclusive dealing.

In an *exclusive dealing arrangement*, a buyer commits to dealing with a single seller. For the duration of the contract, other sellers will be foreclosed from selling to the buyer in question. A *requirements contract* is a close cousin of exclusive dealing. During the term of the contract, the buyer agrees to purchase all of its needs for the good in question from the seller.³⁴ Again, this contract will foreclose other sellers from that part of the market. Typically, these contracts do not involve tying-that is, there need not be a second good involved.³⁵

Private plaintiffs in an exclusive dealing case must argue that they are foreclosed (or excluded) from a market or a book of business. In other words, they are denied the ability to make sales that they would otherwise have made. As a result, they must estimate the lost sales and deduct the incremental costs that were avoided, since those sales were not made, in order to estimate the lost profits. There is nothing unique about this problem. It is the same problem faced by all victims of foreclosure. There are, however, some conceptual difficulties that plaintiffs must confront.

Suppose, for example, that Coca-Cola entered into an exclusive dealing contract with a university. All soft drinks sold in snack bars, cafeterias, and through vending machines would be Coca-Cola products. This would obviously foreclose Pepsi Cola, Dr. Pepper, and others from that campus. Arguably, these foreclosed rivals would lose sales and thereby lose profits. But one must ask why Coca-Cola rather than Pepsi Cola won the contract. If Coca-Cola made a more attractive offer, how does that fact become incorporated into the damages? Pepsi Cola could not claim damages on the basis of undiscounted prices because those are irrelevant. Thus, it would have to use suitably discounted prices in its damage calculations.

The alleged victims of exclusive dealing must also show that they actually lost sales. For example, when Tampa Electric had a requirements contract with Nashville Coal, other coal suppliers arguably were foreclosed from selling to Tampa Electric.³⁶ To proceed, however,

³⁴ In some cases, the contract commits the seller to supply all of the buyer's needs for the good in question.

³⁵ There are times when the two are confused; see *Jefferson Parish Hospital District No. 2 v. Hyde*, [466 U.S. 2 \(1984\)](#), which was analyzed as a tying case as well as an exclusive dealing case.

these other suppliers would have to prove that they had the capacity to produce more coal than they actually had produced. In addition, they would have to prove some likelihood of making the sale. Finally, they would have to estimate the prices at which the lost sales would have been made.

397j.

Foreclosure in resale price maintenance cases.

Resale price maintenance (RPM) involves a conditional sale: the seller supplies the product to a reseller on the condition that the product not be resold below some specified price.³⁷ Traditionally, RPM has been a per se violation of the antitrust laws, but following the 2007 *Leegin* decision, RPM is now evaluated under the rule of reason.³⁸ Private plaintiffs are typically discounters who were terminated because they refused to sell at or above the minimum price demanded by their supplier. Proof of lost profits is extremely difficult for these terminated dealers. Discounters often earn substantial profits prior to being terminated for two reasons. First, they free-ride on the promotional efforts of other dealers, who finance those promotions by charging the specified resale prices. By not providing the promotional services, the discounter has lower costs and thereby higher profits. Second, the discounter can reduce its price below the minimum resale price but still above its costs. As a result, it gets a higher volume than it would otherwise have. These profits, however, flow from the fact that there is an illegal RPM arrangement in place. It is inappropriate to calculate damages on the assumption that the plaintiff can set its price at its profit-maximizing level while the rival dealers adhere to the RPM scheme. In *Local Beauty*, the Seventh Circuit found that "damages based on profits made by a plaintiff because of the existence of an antitrust violation are not recoverable."³⁹ This means that the plaintiff would have to estimate its profits but for the RPM scheme and compare those to its actual profits. Assuming that there is ample competition in distribution, there might not be much-if any-lost profit because competition would drive price to equal average (and marginal) cost.

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³⁶ *Tampa Elec. Co. v. Nashville Coal Co.*, [365 U.S. 320 \(1961\)](#). This is just an example; no one, including Nashville Coal, was clamoring to sell coal to Tampa Electric at the contract prices.

³⁷ On RPM, see 16B-1; H. Hovenkamp, Federal Antitrust Policy Ch. 11, which summarizes the law and economics of RPM. For problems facing private plaintiffs, see Roger D. Blair, Jill B. Herndon, & John E. Lopatka, *Resale Price Maintenance and the Private Antitrust Plaintiff*, [82 Wash. U. L.Q. 657 \(2005\)](#).

³⁸ See P1620; *Business Elecs. Corp. v. Sharp Elecs. Corp.*, [485 U.S. 717 \(1988\)](#). However, see *PSKS, Inc. v. Leegin Creative Leather Products, Inc.*, [171 Fed. Appx. 464 \(5th Cir. Mar. 20, 2006\)](#), cert. granted, [549 U.S. 1092 \(2006\)](#), rev'd and remanded, [551 U.S. 877 \(2007\)](#). The Supreme Court ultimately reversed the per se rule against resale price maintenance. *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, [551 U.S. 877 \(2007\)](#).

³⁹ *Local Beauty Supply v. Lamaur*, [787 F.2d 1197, 1202-03 \(7th Cir. 1986\)](#).